

# AF52-30-11-12



AF52-30-11-12 48-130V50/60HZ-DC Contactor

## General Information

Extended Product Type	AF52-30-11-12
Product ID	1SBL367001R1211
EAN	3471523132429
Catalog Description	AF52-30-11-12 48-130V50/60HZ-DC Contactor
Long Description	<p>AF52 contactors are used for controlling power circuits up to 690 V AC and 220 V DC. They are mainly used for controlling 3-phase motors, non-inductive or slightly inductive loads. AF... contactors include an electronic coil interface accepting a wide control voltage <math>U_c</math> min. ... <math>U_c</math> max. Only four coils cover control voltages between 24...500 V 50/60 Hz or 20...500 V DC. AF contactors can manage large control voltage variations. One coil can be used for different control voltages used worldwide without any coil change. AF contactors have built-in surge protection and do not require additional surge suppressors. The AF... series 2-stack 3-pole contactors are of the block type design. - Main poles and auxiliary contact blocks: 3 main poles with side-mounted 1 N.O. + 1 N.C. auxiliary contact block, front-mounted add-on auxiliary contact blocks (mechanically-linked auxiliary contacts compliant with Annex L of IEC 60947-5-1 including the "Mechanically Linked" symbol on the contactor side. N.C. mirror contacts compliant with Annex F of IEC 60947-4-1) - Control circuit: AC or DC operated - Accessories: a wide range of accessories is available. Note: 2-stack contactors available in some countries: please consult your ABB representative. AF...-30...-11 not suitable for a direct control by PLC-output.</p>

## Ordering

Minimum Order Quantity	1 piece
Customs Tariff Number	85364900

## Popular Downloads

Data Sheet, Technical Information	1SBC100173C0201
Instructions and Manuals	1SBC101036M6801

## Dimensions

Product Net Width	67 mm
Product Net Depth / Length	111 mm
Product Net Height	125.5 mm
Product Net Weight	1.010 kg

## Technical

Number of Main Contacts NO	3
Number of Main Contacts NC	0

Number of Auxiliary Contacts NO	1
Number of Auxiliary Contacts NC	1
Rated Operational Voltage	Auxiliary Circuit 690 V Main Circuit 690 V
Rated Frequency (f)	Auxiliary Circuit 50 / 60 Hz Main Circuit 50 / 60 Hz
Conventional Free-air Thermal Current ( $I_{th}$ )	acc. to IEC 60947-4-1, Open Contactors $q = 40\text{ °C}$ 105 A acc. to IEC 60947-5-1, $q = 40\text{ °C}$ 16 A
Rated Operational Current AC-1 ( $I_e$ )	(690 V) 40 °C 100 A (690 V) 60 °C 80 A (690 V) 70 °C 70 A
Rated Operational Current AC-3 ( $I_e$ )	(220 / 230 / 240 V) 60 °C 53 A (380 / 400 V) 60 °C 53 A (415 V) 60 °C 53 A (440 V) 60 °C 53 A (500 V) 60 °C 45 A (690 V) 60 °C 35 A
Rated Operational Power AC-3 ( $P_e$ )	(220 / 230 / 240 V) 15 kW (380 / 400 V) 22 kW (400 V) 22 kW (415 V) 30 kW (440 V) 30 kW (500 V) 30 kW (690 V) 30 kW
Rated Operational Current AC-15 ( $I_e$ )	(220 / 240 V) 4 A (24 / 127 V) 6 A (400 / 440 V) 3 A (500 V) 2 A (690 V) 2 A
Rated Short-time Withstand Current ( $I_{cw}$ )	at 40 °C Ambient Temp, in Free Air, from a Cold State 10 s 600 A at 40 °C Ambient Temp, in Free Air, from a Cold State 15 min 110 A at 40 °C Ambient Temp, in Free Air, from a Cold State 1 min 250 A at 40 °C Ambient Temp, in Free Air, from a Cold State 1 s 1000 A at 40 °C Ambient Temp, in Free Air, from a Cold State 30 s 350 A for 0.1 s 140 A for 1 s 100 A
Maximum Breaking Capacity	$\cos \phi = 0.45$ ( $\cos \phi = 0.35$ for $I_e > 100$ A) at 440 V 950 A $\cos \phi = 0.45$ ( $\cos \phi = 0.35$ for $I_e > 100$ A) at 690 V 600 A
Maximum Electrical Switching Frequency	AC-1 600 cycles per hour AC-15 1200 cycles per hour AC-2 / AC-4 150 cycles per hour AC-3 1200 cycles per hour DC-13 900 cycles per hour
Rated Operational Current DC-13 ( $I_e$ )	(110 V) 0.55 A / 60 W (220 V) 0.27 A / 60 W (400 V) 0.15 A / 60 W (500 V) 0.13 A / 65 W (600 V) 0.1 A / 60 W (125 V) 0.55 A / 69 W (24 V) 6 A / 144 W (250 V) 0.27 A / 68 W (48 V) 2.8 A / 134 W (72 V) 1 A / 72 W
Rated Insulation Voltage ( $U_i$ )	acc. to UL/CSA 600 V acc. to IEC 60947-4-1 and VDE 0110 (Gr. C) 690 V
Rated Impulse Withstand Voltage ( $U_{imp}$ )	6 kV
Maximum Mechanical Switching Frequency	3600 cycles per hour
Rated Control Circuit Voltage ( $U_c$ )	50 Hz 48 ... 130 V 60 Hz 48 ... 130 V DC Operation 48 ... 130 V
Operate Time	Between Coil De-energization and NC Contact Closing 19 ... 105 ms Between Coil De-energization and NO Contact Opening 17 ... 100 ms Between Coil Energization and NC Contact Opening 38 ... 95 ms Between Coil Energization and NO Contact Closing 42 ... 100 ms
Connecting Capacity Main Circuit	Flexible with Insulated Ferrule 1/2x 4 ... 35 mm <sup>2</sup>

	Flexible with Ferrule 1/2x 4 ... 35 mm <sup>2</sup> Rigid 1/2x 6 ... 3 5 mm <sup>2</sup>
Connecting Capacity Auxiliary Circuit	Flexible with Ferrule 1/2x 0.75 ... 2.5 mm <sup>2</sup> Flexible with Insulated Ferrule 1x 0.75 ... 2.5 mm <sup>2</sup> Flexible with Insulated Ferrule 2x 0.75 ... 1.5 mm <sup>2</sup> Rigid 1/2x 1 ... 2.5 mm <sup>2</sup>
Connecting Capacity Control Circuit	Flexible with Ferrule 1/2x 0.75 ... 2.5 mm <sup>2</sup> Flexible with Insulated Ferrule 1x 0.75 ... 2.5 mm <sup>2</sup> Flexible with Insulated Ferrule 2x 0.75 ... 1.5 mm <sup>2</sup> Rigid 1/2x 1 ... 2.5 mm <sup>2</sup>
Wire Stripping Length	Main Circuit 16 mm
Degree of Protection	acc. to IEC 60529, IEC 60947-1, EN 60529 Auxiliary Terminals IP20 acc. to IEC 60529, IEC 60947-1, EN 60529 Coil Terminals IP20 acc. to IEC 60529, IEC 60947-1, EN 60529 Main Terminals IP10
Terminal Type	Screw Terminals

## Environmental

Ambient Air Temperature	Close to Contactor for Storage -60 ... +80 °C Close to Contactor Fitted with Thermal O/L Relay -25 ... +60 °C Close to Contactor without Thermal O/L Relay -40 ... +70 °C
Climatic Withstand	Category B according to IEC 60947-1 Annex Q
Maximum Operating Altitude Permissible	3000 m
Resistance to Vibrations acc. to IEC 60068-2-6	5 ... 300 Hz 3 g closed position / 3 g open position
Resistance to Shock acc. to IEC 60068-2-27	Closed, Shock Direction: A 25 g Closed, Shock Direction: B1 25 g Closed, Shock Direction: B2 15 g Closed, Shock Direction: C1 25 g Closed, Shock Direction: C2 25 g Open, Shock Direction: B1 5 g

## Technical UL/CSA

General Use Rating UL/CSA	(600 V AC) 80 A
Horsepower Rating UL/CSA	(120 V AC) Single Phase 3 Hp (240 V AC) Single Phase 10 Hp (200 ... 208 V AC) Three Phase 15 Hp (220 ... 240 V AC) Three Phase 20 Hp (440 ... 480 V AC) Three Phase 40 Hp (550 ... 600 V AC) Three Phase 50 Hp
Tightening Torque UL/CSA	Auxiliary Circuit 11 in-lb Control Circuit 11 in-lb Main Circuit 35 in-lb

## Certificates and Declarations (Document Number)

ABS Certificate	ABS_15-GE1349500-PDA_90682247
BV Certificate	BV_2634H36994A
CB Certificate	CB_SE_77418
CCC Certificate	CCC_2012010304589737 CCC_2015010304824714
Declaration of Conformity - CE	1SBD250000U1000
DNV Certificate	DNV-GL_TAE00001AF-1
DNV GL Certificate	DNV-GL_TAE00001AF-1
EAC Certificate	EAC_RU C-FR ME77 B01010
Environmental Information	1SBD250168E1000
Instructions and Manuals	1SBC101036M6801

KC Certificate	KC_HW02016-15010A
LR Certificate	LRS_1300087E1
RINA Certificate	RINA_ELE084013XG
RMRS Certificate	RMRS_1400682124
RoHS Information	1SBD251021E1000
UL Certificate	UL_20130926-E312527_14_1
UL Listing Card	UL_E312527

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## Container Information

Package Level 1 Units	1 piece
Package Level 1 Width	150 mm
Package Level 1 Depth / Length	150 mm
Package Level 1 Height	97 mm
Package Level 1 Gross Weight	1.11 kg
Package Level 1 EAN	3471523132429
Package Level 2 Units	10 piece
Package Level 2 Width	250 mm
Package Level 2 Depth / Length	300 mm
Package Level 2 Height	300 mm
Package Level 2 Gross Weight	11.1 kg
Package Level 3 Units	240 piece

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## Classifications

Object Classification Code	Q
ETIM 4	EC000066 - Magnet contactor, AC-switching
ETIM 5	EC000066 - Magnet contactor, AC-switching
ETIM 6	EC000066 - Power contactor, AC switching
ETIM 7	EC000066 - Power contactor, AC switching
UNSPSC	39121529

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## Categories

Low Voltage Products and Systems → Control Products → Contactors → Block Contactors

